CHAPTER 4 CONDUCT COCKPIT EN ROUTE INSPECTION

SECTION 1 BACKGROUND

1. PTRS ACTIVITY CODES

A. *Maintenance:* 3629

B. *Avionics:* 5629

3. OBJECTIVE. This chapter provides guidance in conducting a cockpit en route inspection.

5. GENERAL

A. *Inspector Qualifications*

(1) Since Aviation Safety Inspectors (ASIs) do not receive systems training on all aircraft, it is important to become familiar with the type of aircraft being inspected before performing the inspection. This can be accomplished through on-the-job training.

(2) The FAA does not allow two ASIs to perform this job task, therefore familiarity with the en route inspection procedures is a necessity before performing this task.

NOTE: An ASI must be authorized through their principal inspector or unit supervisor.

B. *ASI Conduct.* In performing this job task, the actions of an ASI is subject to the close scrutiny of airline employees and the general flying public. Therefore, be alert for leading questions from crewmembers regarding destinations, technical information, and other operators, although it is imperative that tact and good judgment be exercised at all times.

C. *ASI Expertise.* Airworthiness and operations ASIs possess various degrees and types of expertise and experience. When an ASI needs additional information or guidance, they should coordinate with personnel experienced in that particular specialty.

7. INITIATION AND PLANNING

A. *Initiation.* This task is scheduled as part of the work program. Additional inspections may be initiated by national, regional, or district office special requirements.

B. *Planning*

(1) When possible, an en route inspection should be planned to preclude disruption of company scheduled flight checks by check airmen.

(2) ASIs conducting en route inspections will make arrangements for the jump seat/forward passenger seat as far in advance of the flight as possible. ASIs will have priority for available jump seats, with the following exceptions:

- Where a required company check is being conducted from the jump seat
- If the jump seat is required by Secret Service Agents or National Transportation Safety Board Representatives on official duties

(3) When it is necessary to board a flight at an intermediate stop, every effort should be made to advise the pilot in command, prior to boarding the flight, that an en route inspection will be conducted.

(4) ASIs will use the headsets provided by their district office or the operator, as applicable per the Federal Aviation Regulations.

9. FAA FORM 8430-13, REQUEST FOR ACCESS TO AIRCRAFT. The ASI to whom an FAA Form 8430-13 is issued, is personally responsible for its proper use and safekeeping, to include the following:

- Recording every request issued, canceled, or otherwise voided on the inside cover

- Returning it to the issuing office if the ASI transfers, retires, or has no further use for this book
- Returning the cover containing the Record of Requests Issued and the yellow copies to the issuing office when all requests have been used
- Immediately reporting to the issuing office the full set of circumstances concerning any loss of requests

11. PERFORMING THE COCKPIT EN ROUTE INSPECTION

A. *Maintenance Record Inspection.* Open discrepancies or improperly deferred Minimum Equipment List (MEL) items have been discovered in maintenance records just prior to departure. The resulting corrective actions have resulted in lengthy delays.

(1) Regulations require that maintenance be recorded when performed. Procedures for ensuring that these recording requirements are met are described in the operator's maintenance procedures manual.

(2) The manual contains specific instructions on when an airworthiness release or record entry is required. All discrepancies entered in the record must either be corrected or deferred using the methods identified in the operator's maintenance procedures manual. The ASI must become familiar with the operator's maintenance record handling procedures.

B. *Interior Inspection.* This inspection should be performed without disturbing the loading and/or unloading of the passengers. Any discrepancies noted should be brought immediately to the attention of the flight crew. Perform the interior inspection per the guidance in Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, Figure 1-1, Interior Inspection Guidelines.

C. *Exterior Inspection.* It is recommended to accompany a crewmember on the exterior walk-around to determine the thoroughness of the crewmember's inspection. It is important to be aware of the type of maintenance and servicing activities being accomplished. Perform the exterior inspection per the guidance in Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, Figure 1-2, Exterior Inspection Guidelines.

D. *In-Flight Monitoring*

(1) This phase of the inspection provides the opportunity to monitor aircraft systems and evaluate the effectiveness of maintenance performed to correct maintenance record discrepancies.

(2) It is recognized that ASIs have different degrees of pilot skills, but the airworthiness ASI performing an en route inspection is not there to evaluate the competency of the flight crew. However, if obvious discrepancies are noted, such as a deviation from assigned altitude or other operational procedure, they must be brought to the attention of the pilot-in-command and the assigned Principal Operations Inspector.

(3) While conducting an en route inspection, do not manipulate, operate, select, or deselect any switches, circuit breakers, or controls.

13. CARGO/COMBINATION CONFIGURED AIRCRAFT

A. Inspection results have disclosed instances of significant aircraft structural damage resulting from the careless loading of cargo, such as:

- Torn or punctured liners indicating hidden damage to circumferential stringers, fuselage skin, and bulkheads
- Damaged rollers, ball mats, etc. causing significant structural damage to the floors
- Severe corrosion, fire, and structural damage resulting from the improper handling of some hazardous materials

B. The surveillance of hazardous material handling is not the primary function of the cockpit en route inspection. If discrepancies are noted in the handling of hazardous materials, contact the appropriate FAA Security Division.

15. ASI BAGGAGE. The ASI must conform to the operator's approved carry-on baggage program. If there is any concern that the baggage will exceed operator limitations it should be checked. The ASI's identification (FAA Forms 110A, Aviation Safety ASI credential and 8430-13) is adequate documentation for the operator to check the baggage.

17. DEFERRED MAINTENANCE

A. *Minimum Equipment List Deferred Maintenance.* The operator's approved Minimum Equipment List allows the operator to continue a flight or series of flights with certain inoperative equipment. The continued operation must meet the requirements of the Minimum Equipment List deferral classification and the requirements for the equipment loss.

B. *Other Deferred Maintenance*

(1) Operators frequently use a system to monitor items that have previously been inspected and found to be within serviceable limits. These items are still airworthy, yet warrant repair at a later time or when items no longer meet serviceable limits. This method of deferral may require repetitive inspections to ensure the continuing airworthiness of the items. Examples of items that are commonly deferred in this manner are fuel leak classifications, dent limitations, and temporary (airworthy) repairs.

(2) Passenger convenience item (not safety/airworthiness related) deferrals should be handled according to the operator's program guidelines.

C. The operator's approved maintenance program must provide for the prompt and orderly repairs of inoperative items.

19. CREWMEMBER CERTIFICATES. There have been several occasions in which pilots have operated certificate holder aircraft without having in their personal possession airman certificates and current medical certificates. In some cases, pilots have operated for long periods of time with suspended certificates. Therefore, ensure that all flight crewmembers have the proper certificates in their personal possession.

Section 2 Procedures

1. PREREQUISITES AND COORDINATION REQUIREMENTS

A. *Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 121 and/or 135
- Experience in working with the aircraft being inspected. ASIs should have the knowledge to be able to conduct a preflight check.
- Completion of the Airworthiness Inspectors Indoctrination Course or equivalent, and the En Route Course

NOTE: The En Route Course is a mandatory Flight Standards course. ASIs who were previously authorized to conduct en route inspections may continue to do so, but must attend the En Route Course at the earliest possible opportunity.

B. *Coordination.* This task requires coordination between:

- The ASI and the appropriate operator personnel for reserving the jump seat
- Other Airworthiness and Operations ASIs and the possible involvement of regional offices and FAA Security

3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- FAR Parts 21, 43, 45, 47, 61, 63, and 91
- Operator's manual

B. *Forms*

- FAA Form 8430-13, Request for Access to Aircraft

C. *Job Aids*

- Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, Figure 1-1, Interior Inspection Guidelines
- Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, Figure 1-2, Exterior Inspection Guidelines

5. PROCEDURES

A. *Initiate the Cockpit En Route Inspection According to the District Office Work Program*

B. *Prepare for Inspection*

(1) Contact the operator's scheduling section to reserve jump seat/forward passenger seat, as applicable.

(2) Complete FAA Form 8430-13, Request for Access to Aircraft, in duplicate. The white copy will be given to the operator and the yellow copy is kept for FAA records.

C. *Coordinate with Operator's Flight Operations Center One Hour Prior to Flight*

(1) Identify yourself to the operator representative and state that you are performing a cockpit en route inspection on a specific flight.

(2) Present FAA credentials (FAA Form 110A) and the completed FAA Form 8430-13 to the air carrier representative.

(3) Obtain the applicable operator boarding authorization. (Each operator has different boarding authorization procedures, but all have some method of accounting for the ASI being on-board.) If aircraft access is denied:

- Advise the operator representative of the regulation authorizing ASI access to aircraft
- Request to see the appropriate supervisor if the representative still refuses access
- Stress the fact that the denial of access is contrary to regulations and that enforcement action may be taken
- Upon return to the office, describe the occurrence to the appropriate supervisors if access was still denied

(4) Proceed to the aircraft as soon as possible to review the maintenance record and to perform interior and exterior pre-departure inspections as time allows. Follow the operator's procedures for pre-boarding the aircraft.

D. *Identify Yourself to The Flight Crew*

(1) Before boarding the aircraft or performing the exterior inspection:

- Identify yourself to the pilot-in-command and flight crew as an Airworthiness ASI
- State the purpose of the inspection

(2) If cockpit access is denied:

- Advise the pilot-in-command of the regulation authorizing ASI access to the pilot's compartment
- Concede to the pilot's wishes if the pilot-in-command still refuses to allow access

- Make it very clear to the pilot-in-command that the denial of access is contrary to regulations and that enforcement action may be taken

- Upon return to the office, describe the occurrence to the appropriate supervisors if access was still denied

E. *Inspect the Aircraft Maintenance Record*

NOTE: Notify the appropriate operator personnel immediately of any discrepancies noted during this inspection.

(1) Ensure the following:

- Maintenance/Airworthiness releases are current

- No open items exist

- All discrepancies are corrected or properly deferred

- Minimum Equipment List items were deferred per the procedural and placarding requirements of the operator's approved program

(2) Ensure the length of deferrals are not exceeded, by reviewing the following:

- Maintenance record pages

- Deferred maintenance list

- Deferred maintenance placards/stickers

(3) Ensure that the maintenance records contain the following for each discrepancy:

- A description of work performed or reference to acceptable data

- The name of the person performing the work if outside the organization

- The name or other positive identification of the person approving the work

(4) Determine if repetitive problems indicate a trend.

F. *Perform the Interior Inspection, as Applicable.* See Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, Figure 1-1, Interior Inspection Guidelines.

G. *Conduct the Exterior Inspection of Aircraft, as Applicable.* See Vol. 3, Ch. 1, Introduction to Aircraft and Equipment, Figure 1-2, Exterior Inspection Guidelines.

(1) Record any discrepancies noted during the exterior inspection and bring them to the attention of the pilot-in-command or appropriate operator personnel.

(2) Evaluate the action(s) taken by the operator in response to the discrepancies.

NOTE: If actions taken by the operator do not comply with regulatory requirements or the operator's manual, terminate the inspection. Advise the operator of the noncompliance and the possibility of enforcement action. If the discrepancy constitutes an unsafe condition, see Vol. 3, Ch. 6, Ground Operator Aircraft.

H. *Prior to Pushback, Accomplish the Following:*

(1) Ensure all of the discrepancies noted during predeparture were corrected

(2) Request and review the pilot and medical certificates of all flight crewmembers. Ensure the following:

(a) *Pilot-in-command:* The pilot-in-command must have in possession the following:

- An Airline Transport Pilot certificate

- First class medical certificate, which is valid for six months

- Appropriate type rating for the aircraft being operated

(b) *Second in command:* The First Officer must have in possession the following:

- At least a commercial pilot certificate in the appropriate category and class
- Appropriate instrument rating for the aircraft being operated
- At least a second class medical certificate, which is valid for twelve months

(c) *Flight engineer:* Flight engineers must have in their possession the following:

- Appropriate flight engineer's certificate
- Second-class medical, which is valid for twelve months

(3) If the flight crewmembers do not have the proper, current certificates in their possession:

(a) Advise the offending crewmembers that they will be in violation of FAR §§ 61.3 and/or 63.3

(b) If the flight crewmembers still elect to operate the aircraft without having the appropriate certificates in their possession:

- Deplane
- Terminate this inspection
- Immediately notify the operator's operations center

(4) Ensure the load manifest contains the following information:

- The number of passengers
- The total weight of the loaded aircraft
- The maximum allowable takeoff weight for that flight
- The center of gravity limits
- The actual center of gravity of the loaded aircraft, unless the aircraft is loaded according to an approved loading schedule
- The registration number of the aircraft or the flight number
- The origin and destination of the flight
- The identification of the flight crewmembers and their respective position assignments

(5) Ensure the proper fuel load is on-board by comparing fuel gages to the minimum fuel required for dispatch. This fuel requirement is normally found on the dispatch release.

I. *Monitor In-flight Operations*

NOTE: During the en route inspection, point out any potential violations prior to their occurrence and inform the crew of the possible consequences.

(1) Ensure the flight crew is using and following the operator's approved checklists for all activities.

(2) Exercise good cockpit discipline and ensure the flight crew does the same, to include the following:

- Sterile cockpit rule compliance
- Proper use of cockpit/personal lighting
- Compliance with the pilot-in-command's requests

(3) Monitor all gages during flight for normal operation.

(4) Monitor communications for crew compliance with air traffic control.

(5) Ensure that left and right-seat crewmembers are in compliance with the oxygen requirements of the Federal Aviation Regulations.

(6) Note and record all discrepancies observed.

NOTE: To assist the crew, be alert for any conflicting air traffic

J. *Debrief Flight Crew.* At the termination of the flight, state whether the operations were satisfactory or unsatisfactory.

(1) If irregularities were noted in the performance of any aircraft system, discuss them with the pilot-in-command. Ensure that these discrepancies are entered in the aircraft maintenance record. If the pilot-in-command is unwilling to enter these discrepancies, advise that the failure to record these discrepancies is contrary to regulatory requirements.

(2) Unsatisfactory operational findings should be brought to the attention of the operator's assigned Principal Operations Inspector.

7. TASK OUTCOMES

A. *File PTRS Transmittal Form*

B. Completion of this task can result in the following:

- Satisfactory inspection
- Requirement for a follow-up inspection for a specific discrepancy

C. *Document Task.* File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Schedule follow-up inspections, as applicable.